

IN THE CLAIMS:

1. (Original) A composition for enhancing immune response in an animal, comprising: a peptide selected from the group SEQ. ID. NO: 1, SEQ. ID. NO: 3, SEQ. ID. NO: 4, SEQ. ID. NO: 5, SEQ. ID. NO: 6, SEQ. ID. NO: 7, and functional equivalents.
2. (Currently amended) The composition of claim 1, further ~~including~~ comprising a first antigen.
3. (Currently amended) The composition of [in] claim 2, wherein the first antigen is cholera toxin.
4. (Currently amended) The composition of [in] claim 2, wherein the peptide and first antigen comprise a fusion protein.
5. (Original) The composition of claim 1, wherein the composition is capable of mucosal administration.
6. (Currently amended) The composition of claim 1, wherein the composition is formulated as a systemic adjuvant.
7. (Currently amended) The composition of claim 1, wherein the composition is formulated as a mucosal adjuvant.
8. (Currently amended) The composition of claim 1, wherein the composition is formulated as [a] an epidermal adjuvant.

9. (Currently amended) A method of enhancing immune response in an animal comprising: ~~administering~~ providing a peptide selected from the group SEQ. ID. NO: 1, SEQ. ID. NO: 3, SEQ. ID. NO: 4, SEQ. ID. NO: 5, SEQ. ID. NO: 6, SEQ. ID. NO: 7, and functional equivalents[,]; and administering the peptide to the animal.
10. (Currently amended) The method of claim 9, further ~~including~~ comprising administering a first antigen to the animal.
11. (Currently amended) The method of claim 10, wherein the first antigen is a cholera toxin.
12. (Original) The method of claim 11, wherein the peptide and the first antigen comprise a fusion protein.
13. (Currently amended) The method of claim 9, wherein the step of administering the peptide is carried out ~~peptide is administered~~ mucosally.
14. (Currently amended) A method for delivering a cargo protein to an animal cell, comprising: ~~constructing~~ providing a fusion protein comprising ~~including~~: a peptide selected from the group SEQ. ID. NO: 1, SEQ. ID. NO: 3, SEQ. ID. NO: 4, SEQ. ID. NO: 5, SEQ. ID. NO: 6, SEQ. ID. NO: 7, and functional equivalents; and a cargo protein, wherein the cargo protein is linked to the peptide; and administering the fusion protein to the animal.
15. (Cancelled)
16. (Cancelled)
17. (Currently amended) The method of claim 14, wherein the cargo protein is[a] an [first] antigen.
18. (Currently amended) The method of claim 17, wherein the fusion protein presents the [first] antigen to the immune system of the animal.

19. (Currently amended) The method of claim 17, wherein the [first] antigen is a cholera toxin.
20. (Original) The method of claim 14, wherein the fusion protein is encoded by a DNA sequence capable of being incorporated into a viral DNA vector.
21. (Original) A genetically-modified living cell capable of enhancing immune response in an animal, comprising: a first DNA sequence encoding a peptide selected from the group SEQ. ID. NO: 1, SEQ. ID. NO: 3, SEQ. ID. NO: 4, SEQ. ID. NO: 5, SEQ. ID. NO: 6, SEQ. ID. NO: 7, and functional equivalents.
22. (Currently amended) The genetically-modified living cell of claim 21, further comprising ~~including~~ a second DNA sequence encoding [a] an [first] antigen.
23. (Currently amended) The genetically-modified living cell of claim 22, wherein the [first] antigen is a cholera toxin subunit.
24. (Original) The genetically-modified living cell of claim 21, wherein the peptide is capable of enhancing a mucosal immune response in the animal.
25. (Original) The genetically-modified living cell of claim 22, wherein SEQ. ID. NO: 8 comprises the first DNA sequence and the second DNA sequence.
26. (Currently amended) The genetically modified living cell of claim 22, wherein SEQ ID NO.: 9 comprises the first DNA sequence and the second DNA sequence. ~~code for SEQ. ID. NO: 9.~~
27. (Currently amended) The genetically-modified living cell of claim 22, wherein the DNA encoding the peptide is genetically fused to the DNA encoding the first antigen.

28. (Original) A method for constructing a fusion protein for enhancing immune response in an animal, comprising: constructing a vector including a first DNA molecule encoding for a peptide selected from the group SEQ. ID. NO: 1, SEQ. ID. NO: 3, SEQ. ID. NO: 4, SEQ. ID. NO: 5, SEQ. ID. NO: 6, SEQ. ID. NO: 7; and linking the vector to a second DNA molecule encoding for a first antigen.